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M3 - [01] H102 H103 H181 H401 H402 H481 H482 H581 J011 J271 K0 K4 K431 L660
L699 M210 M211 M212 M213 M214 M231 M232 M233 M272 M273 M280 M281 M282
M311 M312 M313 M315 M316 M321 M322 M331 M332 M333 M342 M383 M391 M392
M416 M620 M630 M781 M903 M904 Q273 Q616 R032; 8743-C9901-U; 8714-0
1286-M

PA - (LIOY) LION CORP

PN - JP62212498 A 19870918 DW198743 006pp

PR - JP19860054371 19860312

XA - C1987-129081

XIC - C11D-003/14 ; C11D-017/06

AB - J62212498 A granular detergent compsn is prepd by coating powdery
mixt. comprising detergent and 5-29 wt.% alkane sulphonate salt of
formula (I) or (II) with water-insoluble micropowder having average
particle size up to 10 microns and bulk density of 0.5-1.2 g/ccm

- In the formulae, R1=6-20C alkyl, R2=2-4C alkyl, acyl or 1-3C
hydroxyalkyl, R3 and R4 are each independently 1-2C alkyl or 1-3C
hydroalkyl, M=alkali metal, alkaline earth metal, ammonium or organic
amine and n=integer of 2-3.

- The sulphonate salt (I) is pref prepd. by reacting an alpha-olefin
with SO₃ gas diluted by an inert gas to prepare 1,3-propane sultone
and by reacting the sultone with an alcohol (e.g. methanol, ethanol or
n- or isopropanol) or carboxylic acid (e.g. formic, acetic or
propionic acid). The sulphonate salt (II) is pref. prepd. by reacting
1,3-propane-sultone or 1,4-butane-sultone with an amine (e.g.
dimethyl-, diethyl-, monoethanol- or diethanol-amine). The detergent
compsn pref contains other anionic detergent (e.g. linear alkylbenzene
sulphonate salt, alpha-olefin sulphonate salt, alkyl sulphate salt or
alkylether sulphate salt) or nonionic detergent (e.g. alcohol
ethoxylate or alkylphenol ethoxylate), builder (e.g. zeolite or
water-soluble builder), refouling inhibitor, reducing agent, enzyme,
fluorescent due, Na₂SO₄.10H₂O and perfume. Pref. the detergent
compsn is crushed and the crushed and screened granules are coated
with water-insoluble micropowder (e.g. Ca- or Mg stearate, zeolite,
SiO₂, CaCO₃, MgCO₃, SiO₂ or TiO₂) to provide coated granules having
bulk density of 0.5-1.2.

- USE/ADVANTAGE - The alkane sulphonate salt improves the solubility and
washing power of high bulkd density granular detergent compsn.(0/0)

CN - 8743-C9901-U

DRL - 1286-M 8714-0

IW - HIGH BULK DENSITY GRANULE DETERGENT COMPOSITION PREPARATION COATING
POWDER COMPRISE DETERGENT ALKANE SULPHONATE SALT WATER INSOLUBLE MICRO
POWDER

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POWDER

NC - 001

OPD - 1986-03-12

ORD - 1987-09-18

PAW - (LIOY) LION CORP

**TI - High bulk density granular detergent compsn. - prepd. by coating
powder comprising detergent and alkane sulphonate salt with water
insol. micro:powder**